

The American FERTILIZER

FREE MATS ON REQUEST

TO COOPERATE with the War Food Administration and the Fertilizer Industry, Barrett will supply anyone who sells fertilizer with newspaper mats of this design, without cost or obligation.

These mats are available in two sizes: small size (two newspaper columns wide) as pictured here; and large size of the same design (three newspaper columns wide).

By placing the fertilizer man's name and address under the design, these mats are suitable for use as newspaper advertisements. Or they can be used as inserts in large advertisements.

Mats can be obtained by writing to any Barrett office listed below. Please specify size and quantity. *The early movement of fertilizer is more important this year than ever before in history.*

WAR FOOD ADMINISTRATION RECOMMENDS:

**BUY YOUR
FERTILIZER
NOW!**

ACCEPT EARLY DELIVERY!

THE BARRETT DIVISION ALLIED CHEMICAL & DYE CORPORATION

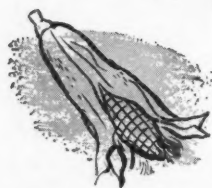
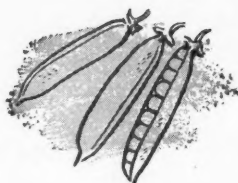
40 RECTOR STREET, NEW YORK 6, N. Y. • 133 CARNEGIE WAY,
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116 NEW MONTGOMERY STREET, SAN FRANCISCO 5, CALIF.



HEADQUARTERS
FOR
AMERICAN-MADE
NITROGEN

BARRETT NITROGEN SOLUTIONS ★ *ARCADIAN, THE AMERICAN NITRATE OF SODA ★ DOMESTIC SULPHATE OF AMMONIA
* REG. U. S. PAT. OFF.

REG. U. S.
PAT. OFF.



VICTORY SYMBOL ON THE FARM FRONT



● Just as the letter "V" has assumed a new meaning since the war, so has the Old Zia sun symbol . . . trade-mark of Sunshine State Potash . . . gained new significance on the home food front.

Fertilizer manufacturers, throughout the country, know this sign. And farmers know that fertilizers compounded with potash mean success in the battle to raise bumper crops . . . bumper crops that must feed not only our own nation, but those of our Allies as well. Through the use of potash, the vital soil nutrient, farmers have means of combating plant disease and drought . . . and an important aid in producing strong, healthy crops.

Thus, Sunshine State Higrade Muriate of Potash, and the other grades you know, stand for Victory in America's essential food fields.



UNITED STATES POTASH COMPANY, Incorporated • 30 ROCKEFELLER PLAZA, NEW YORK CITY

Published every other Saturday. Annual subscription: In the United States, \$3.00; Canada and Mexico, \$4.00; other countries, \$5.00. Entered as second-class matter, January 15, 1910, at the Post Office at Philadelphia, Pa., under Act of March 3, 1879. Registered in United States Patent Office. Publication office, 1330 Vine St., Phila., Pa.

To keep you supplied with Bags

WE'RE NOT OVERLOOKING
A SINGLE BET

THERE are many angles to the job of keeping the fertilizer industry supplied with bags in these days of shortages. But we're working on all of them! Here's an example:

A shortage of the necessary cotton cloth is, of course, a bottleneck. So, to supplement our usual close cooperation with the cotton industry, we took an unusual step—

An advertisement, appearing in the leading cotton textile newspaper, told the cotton merchants (1) about the amazing growth of the essential fertilizer industry, (2) the need for bags for fertilizer and (3) the types of cotton goods particularly needed.

The whole object of this unusual undertaking is to create a closer cooperation between the cotton textile and the bag industries . . . to give you greater assurance of the supply of bags you need.

BEMIS BRO. BAG CO.

Baltimore • Boston • Brooklyn • Buffalo • Charlotte
Chicago • Denver • Detroit • East Pepperell • Houston
Indianapolis • Kansas City • Los Angeles • Louisville
Memphis • Minneapolis • Mobile • New Orleans • New
York City • Norfolk • Oklahoma City • Omaha • Peoria
St. Helens, Ore. • St. Louis • Salina • Salt Lake City
San Francisco • Seattle • Wichita • Wilmington, Calif.

No. 10 of a Series

An Open Letter to the Cotton Textile Industry:

☆ ☆ ☆

One of the largest, and fastest-growing, uses for bags in shipping commercial fertilizer. The cotton contractors used in making these bags are principally 36" x 18" x 4" and 48" x 18" x 4" Cheesburg.

A quick review of the growth of the business and the trend in its use of bags may be interesting.

In the 1920's, the annual consumption of commercial fertilizer in the United States ranged from 6 to 8 million tons. In 1932, when farm prices were depressed, it rose to about 4 million tons, after which it started a rather rapid climb. Last year the total was over 11 million tons. It will probably exceed that mark this year.

As for the importance of the fertilizer industry, consider this point: 20% of the cotton textile production last year was due to the use of fertilizer. Putting fertilizer, cottonseed, of an additional 50 million acres would have been necessary in order to produce the same amount of farm crops. And 50 million acres is nearly one and one-half times the area of the State of Iowa.

Now for a little bag history. Up to about 1934, fertilizer was packed principally in burlap. Cottons accounted for only about 15%, and paper about 1%,

In the intervening years, burlap held fairly steady in the actual number of bags used, although it declined percentagewise because total fertilizer production had gone up. Another factor—during part of 1942 and all of 1943, the use of burlap bags for fertilizer was prohibited by the WPA.

Since 1934, cotton bags definitely have gained in preference. In 1943 more than three times as many were used as in 1942, amounting for about 25% of the total.

Here's an interesting observation from the cotton viewpoint. Last year, the first full year when burlap was not permitted to be used for fertilizer, a choice between cotton and paper bags had to be made to replace the prohibited burlap. Since deliveries of cotton bags increased over the previous year much more than those of paper, the preference must have been for cotton.

Burlap is coming back into the picture to some extent as WPA now permits it to be used. However, cotton goods can be provided in sufficient quantity to meet the constantly increasing demand for cotton bags, there is a good chance that the important volume of business can be retained after the war even when other types of bags are again freely available.

Bemis Bro. Bag Co.

TERRELL BROS. PLANTS IN . . . Brooklyn • Buffalo • Houston • Indianapolis • Kansas City • Memphis • Minneapolis • New Orleans • Norfolk • Omaha • St. Louis • San Francisco • Seattle • Wichita

This is a greatly reduced reproduction of the advertisement to the cotton textile industry, telling how cotton goods are required for bags for fertilizer. Copy will be sent you on request.



East Pepperell, Mass.

Ashcraft-Wilkinson Co.

**Fertilizer
Materials**



**Feeding
Materials**

Home Office: **ATLANTA, GA.**

CABLE ADDRESS:
ASHCRAFT

Offices: **NORFOLK, VA., CHARLESTON, S. C.**

ALL FERTILIZER MATERIALS

FOREIGN AND DOMESTIC

Ammonium Nitrate Sulphate of Ammonia
Organic Ammoniates

Exclusive Distributors : DUVAL TEXAS SULPHUR



AMERICAN POTASH and CHEMICAL CORPORATION

122 East 42nd St.

New York City

Pioneer Producers of Muriate in America

Branch Offices

214 Walton Building
ATLANTA, GEORGIA

542 Conway Building
CHICAGO, ILLINOIS

600 South Grand Avenue
LOS ANGELES, CALIF.

MURIATE and SULPHATE of POTASH

Plant foods are urgently needed
to grow the crops which feed our
nation and our armed forces.

Our plant at Trona, Calif., is
operating at capacity to provide
supplies of these essential plant
foods, and other materials needed
in the national effort.

Manufacturers of Three Elephant Borax and Boric Acid

See page 23





Producers of SULPHUR

Large stocks carried at all times, permitting prompt shipments . . . Uniformly high purity of 99½% or better . . . Free of arsenic, selenium and tellurium.

TEXAS GULF SULPHUR CO.
 75 E. 45th Street New York 17, N.Y.
 Mine: Newgulf, Texas

FLORIDA PEBBLE PHOSPHATE ROCK

PHOSPHATES FOR A VICTORY CROP

This year, more than ever before, American farmers need phosphates to grow bigger, better crops to feed America and her allies. Phosphate fertilizers are particularly important in "high vitality" war-crop production. With our background of 38 years in producing phosphate rock we are well prepared to meet wartime needs of the fertilizer industry for this essential plant food source. Because our experience includes the mining and preparation of all grades of Florida phosphate rock we are in a position to render valuable service to fertilizer manufacturers.



THE PHOSPHATE MINING CO.
 110 WILLIAM STREET, NEW YORK • NICHOLS, FLORIDA

A Complete Service

THE strategic factory locations of the American Agricultural Chemical Company, as shown on the accompanying map, assure prompt, dependable service for the complete line of products listed below.

We manufacture all grades of Commercial Fertilizers, Superphosphate, Agrinite Tankage, Bone Black, Bone Black Pigments (Cosmic Black), Dicalcium Phosphate, Monocalcium Phosphate, Gelatin, Agricultural Insecticides (including Pyrox, Arsenate of Lead, Calcium Arsenate, etc.), Trisodium and Disodium Phosphate, Phosphorus, Phosphoric Acid, Sulphuric Acid, Salt Cake, and we are importers and/or dealers in Nitrate of Soda, Cyanamid, Potash Salts, Sulphate of Ammonia, Raw Bone Meal, Steamed Bone Meal, Sheep and Goat Manure, Fish and Blood. We mine and sell all grades of Florida Pebble Phosphate Rock.



FACTORIES

Alexandria, Va.	Detroit, Mich.	Pensacola, Fla.
Baltimore, Md.	East St. Louis, Ill.	Pierce, Fla.
Buffalo, N. Y.	Greensboro, N. C.	Port Hope, Ont., Can.
Carteret, N. J.	Havana, Cuba	Savannah, Ga.
Cayce, S. C.	Henderson, N. C.	Searsport, Maine
Chambly Canton,	Montgomery, Ala.	South Amboy, N. J.
Quebec, Can.	Norfolk, Va.	Spartanburg, S. C.
Charleston, S. C.	No. Weymouth,	West Haven, Conn.
Cincinnati, Ohio	Mass.	Wilmington, N. C.
Cleveland, Ohio		

The AMERICAN AGRICULTURAL CHEMICAL Co.

50 Church Street, New York City

SALES OFFICES



Alexandria, Va.	Columbia, S. C.	Laurel, Miss.	Pierce, Fla.
Baltimore, Md.	Detroit, Mich.	Montgomery, Ala.	Port Hope, Ont., Can.
Buffalo, N. Y.	East St. Louis, Ill.	Montreal, Quebec, Can.	Savannah, Ga.
Carteret, N. J.	Greensboro, N. C.	New York, N. Y.	Spartanburg, S. C.
Charleston, S. C.	Havana, Cuba	Norfolk, Va.	Wilmington, N. C.
Cincinnati, Ohio	Henderson, N. C.	No. Weymouth, Mass.	
Cleveland, Ohio	Houlton, Me.	Pensacola, Fla.	

... THE ...

AMERICAN FERTILIZER

"That man is a benefactor to his race who makes two blades of grass to grow where but one grew before."

Vol. 101

SEPTEMBER 23, 1944

No. 6

Outlook for Post-War Prosperity*

By JAMES G. ROGERS, Jr.

OPA Deputy Administrator

TODAY the spotlight is on post-war planning. What's going to happen when the shooting stops? What about jobs, profits, prices?

The key to the answers, I believe, is full production. What we do in the coming months will determine whether or not we build a sound structure for that production. And so I'd like to tell you about some of the problems of pricing which lie ahead for us at OPA. And how those problems relate to broader questions of post-war prosperity.

For nearly two years now I've been in Washington . . . for the last year at OPA. During that time, among other things, I've helped to take OPA through a major reorganization. I've come to know something of the people who have really done the work on wartime price control, rent control and rationing. I've come to have a great respect for them . . . for the employees and for the more than 110,000 volunteers who are responsible for the functioning of more than 5,600 War Price and Rationing Boards.

During my stay in Washington, I've learned, too, a few things about pressure groups. Sooner or later, they all call on OPA . . . labor, business, farmers, consumers. And of course, on top of those I could add the calls we get from Congress. Last year OPA got thirty-five thousand telephone calls from Congressmen and Senators alone. That's about 130 every working day, and sometimes I think a very good share of those come on my extension!

Sometimes the workings of the pressure

groups are very disturbing. Each one seems to be determined to get an advantage for his particular group, without any regard whatsoever for the welfare of the country as a whole. Oftentimes, it seems to me that perhaps the biggest job on the post-war horizon is the one of persuading each group to work with others to solve the major questions on the economic front. If there is a determined effort to solve some basic questions, each group will get a reasonable slice of a large economic pie. But if each insists on going after special advantages, the result can only be at best a slightly larger slice of a much smaller economic pie.

You can't view the scene from the OPA vantage point without seeing just how the economy works, because OPA actions have such an important impact on the economy.

Certainly, as we look backwards over the economic scene, we are amazed at the job this country of ours has done in this war. Our production figures of material for war are amazing enough in themselves. For the last year, the figures have been running pretty close to one hundred billion dollars. By and large, the Army and Navy have had what they need to get the job done. Ask any sailor or soldier how his equipment stands up and he'll tell you the story, never was there any better.

Certainly a good share of the credit for the magnificent achievement of our Armed Forces in Europe and in the Pacific goes to those who planned and carried out this magnificent production job.

But on top of that, the production of consumer goods is running at a rate about 15 per cent higher than the pre-war year of 1939.

*Address at the Meeting of the Associated Chain Drug Stores, September 13, 1944.

While there have been some discomforts here and there, the fact is that civilians as a whole have never been better off than they are today. There is more money in pocketbooks, people are buying more goods and services than ever before. To some of us it doesn't seem that way. There are many things we'd like to buy which aren't available. But the fact is that last year American civilians bought ninety billion dollars worth of drugs and food and clothes and haircuts and train tickets, and everything else they could find to buy.

An interesting example comes from the figures for meat. In the years 1935 to 1939, the average amount of meat eaten per person per year was 126 pounds. In the first six months of 1944, the OPA rationed 155 pounds per person per year. The standard of living is high . . . much higher than many ever thought it could go without major developments in the whole economy.

Price Controls Adequate

In spite of all that extra money in people's pocketbooks and in spite of very favorable business conditions, prices have been generally held in control.

You know that in the last war the cost of living was up 108 per cent from the start of the war until the end of the inflationary period. In this war, these prices are up 28 per cent since August, 1939.

Since May, 1942, when first controls were put into effect and when the General Maximum Price Regulation was issued, prices have gone up only slightly. During that period, the cost of living has risen about 9 per cent. During the last fifteen months it has scarcely risen at all.

Industrial prices have been held, too, since the spring of 1942 when general controls were put into effect. The increase is just about 3 per cent. It is perhaps worth mentioning that in the last war the price of steel was up 187 per cent at the Armistice. In this war, steel hasn't increased at all. Copper prices have been held absolutely even since. So have plate glass and industrial enamel. Some, like aluminum, have actually gone down.

Thus, for the first time in any war, we have managed to keep our prices from skyrocketing upwards, and in so doing we have given every family in the land a full and fair measure of protection from wartime inflation. Further, the businessman has been able to plan ahead. He could tell what his prices would be. He has been protected from the chaos of inflation.

Certainly some industries or particular firms have found themselves squeezed. Obviously everyone hasn't prospered, but, by and

large, the record is impressive. Last year, failures were just one-half of what they were in the lowest year in the last fifty years. Corporation profits before and after taxes were at an all-time high. Net farm income adjusted for inventory was 40 per cent higher than in 1919, which for over twenty years was considered the banner year for farmers. In spite of individual cases of hardship, it is certainly fair to say that the country was never better off.

Maintain High Living Standards

The question then is, "Where do we go from here?" "What do we look forward to in post-war America?" "What do we hope for and how can we . . . all of us working together . . . plan to keep our economy ticking along at something like this very high level?"

It seems to me we should all start by working together to take advantage of the brains, the imagination, the resources and the power we have in this country. We have worked together. We have shown what we can do. We have developed an economic pace almost double what we thought of as reasonably good before we got into the war. Why accept the premise that only in wartime are high production and full employment possible? I, for one, think we should forget about 1941 volume and concentrate on civilian volume 50 or 60 per cent higher. We can if we produce the goods and thus create the employment. If we can get close to full employment, people will buy.

There is a greater want and desire for goods in this country than ever before. For some time, people have been unable to get some of the products they would like to have. They are all ready to buy those first autos and refrigerators and radios and so on. Others have been introduced to products they never thought they'd be able to buy. More people are eating well today than ever before, and they're going to want to continue to do so after the war . . . provided, of course, they have the money with which to buy. That money can come only from jobs. When there is full employment, there are markets for farm products and for the products of business. The standard of living remains high.

What are some of the things we need to do to provide the kind of economy in which full employment, or close to it, can flourish?

Looking ahead for the coming months, these are some which seem to me important.

First, we must make certain that inflation remains in check. After the last war, wholesale prices rose 45 per cent. There was a mad scramble for inventories. The price bubble

grew bigger and bigger. Then in May, 1920, the bubble burst.

In a few months cotton prices dropped 75 per cent, beef steers fell 58 per cent, wheat fell 64 per cent, hides dropped 83 per cent and denims dropped 64 per cent. Factory payrolls were down 44 per cent. Profits after taxes fell 101 per cent, that is, profits were converted into actual losses, which practically wiped out all the reserves accumulated during the war period.

Our battle against inflation is far from being won. The problems that lie ahead are still difficult.

No one in OPA wants to continue price controls a day longer than necessary to prevent inflation. But we cannot overlook the fact that during the World War I period, the worst inflation came *after* the war was over. This time there may be still greater inflationary forces at work. If we permit prices to soar even as much as they did during the two years after the Armistice, we shall be inviting a worse depression than any we have yet experienced.

OPA's Part in Preventing Inflation

The OPA's part in preventing this twin disaster is vital. We must see to it, with the help of business, labor and agriculture, that the cost of living is held until the danger of inflation has passed. We must be prepared to set new prices on such goods as washing machines, radios, electric irons, refrigerators and cook stoves as promptly as cutbacks in war contracts release plant capacity and manpower for their protection. We must be prepared to set prices promptly for the many new and improved products which come into business, so that they will start to move over your counters to build that much better volume. In setting prices on reconverted items, we must make sure to take into consideration increased labor costs. We must be sure that our policies do not stand in the way of high wage rates which are basic to prosperity. We must take into consideration increased material costs, too, though in most of the consumer durable products these should not be serious, since prices of basic commodities have been held almost level since manufacturers in this field converted to war goods.

On the other hand, we must consider, wherever possible, what technological improvements mean in lower costs. And finally, we must consider fair and reasonable profits to stimulate the improvements in old products, to stimulate the new products, and indeed the new enterprises which will be ready to go. All this, of course, within the limits of still

maintaining our objective of a stable level of prices, for the threat of inflation is far from over.

Again we must be ready to act promptly so that manufacturers and distributors can move ahead quickly and immediately take advantage of the markets which are available today.

Last, but not least, we must be prepared to remove price and rent controls in one commodity field or community after another as soon as it is clear that the danger of inflation is over.

If we can do this job well, I believe we can develop a peacetime structure of prices which will provide a basis for full production after the war.

But, of course, that is only a start. Perhaps we ought to say it this way . . . an unstable price structure can put us off to a poor start and can interfere with getting peacetime production in full swing.

Final Decision Lies With Industry

To a large extent, it seems to me, the final decision as to whether there will be full production or not lies with business itself. When wartime price controls are removed, both business and Government will breathe a sigh of relief. But, actually, some of our biggest problems will still be ahead.

In private business before the war, it seemed to me there was an increasing tendency among some businessmen to set their prices at relatively high levels in order to secure the largest possible profit on each unit of output. Competition, of course, always sets some limit to this practice. But, as all of us know, competition is far from perfect in today's economic system. Many a business which carries a trade name and advertises it extensively tends to compete more in sales efforts than in price reductions. This situation is, of course, in sharp contrast to what happens in agricultural markets where prices are set almost entirely by the free play of supply and demand.

A business policy of relatively high prices and high unit profits does not necessarily result in large total profits. High prices limit demand, sales, production and employment. As employment and purchasing power are reduced, the total market for both industrial and agricultural products shrinks. Farm prices tend to drop rapidly, leaving the farmer unable to buy the products of industry. More unemployment and still greater reductions in purchasing power result. The stage is thus set for collapse, both in agriculture and

(Continued on page 28)

Industry Advisory Committee Plans For Coming Season

Effect of End of European War Discussed. Shortage in Nitrogen and Superphosphate Expected. No Substantial Changes in Price Ceilings Expected.

THE WFA Fertilizer Industry Advisory Committee met in Washington on September 21st, P. H. Groggins, WFA, presiding. Also present: H. M. Albright, George Cushman, Ralph B. Douglass, Franklin Farley, George W. Gage, M. H. Lockwood, M. H. McCord (for C. F. Hockley), John L. Morris (for Wm. B. Tilghman, Jr.), Weller Noble, O. J. Noer, Walter S. Rupp, John E. Sanford, C. D. Shallenberger, F. T. Techter (for S. B. Haskell), F. J. Woods, J. A. Woods, members of the Committee; Charles J. Erand, R. W. Cummings, J. A. Howell, D. S. Murph, J. W. Turrentine, N. J. Volk, E. L. Worthen, R. E. Yoder, by invitation; G. R. Carson, Thomas L. Jefferies, C. L. Long, L. G. Porter, Fertilizers Division, WFA, USDA; D. W. Aitken, John C. Bagwell, W. G. Finn, R. J. Haskell, J. B. Hutson, David Meeker, W. H. Ross, J. H. Stallings, W. F. Watkins, E. D. White, other USDA; S. L. Clement, W. R. Corey, R. R. Hull, Dale C. Kiefler, William Lehmann, H. L. Taylor, WPB; Cedric G. Gran, W. T. Hart, OPA.

War Emergency Control Orders

In view of the prospects for an early end of the war in Europe, the question of termination of WPB and WFA war emergency control orders was discussed. Mr. Kiefler stated that it was the present plan of the War Production Board to remove all allocation controls as of the date of Germany's capitulation—except such controls as might be necessary for military requirements, including furtherance of the war with Japan. Mr. Groggins stated that three courses were open as to War Food Order 5: (1) It might be revoked immediately after collapse of Germany; (2) it might be revoked at the same time as the WPB orders on nitrogen, sulphuric acid, and potash; (3) it might be revoked as of June 30, 1945. A majority of the Committee members thought that it should be revoked as of June 30, 1945. The view was expressed that revocation in the midst of the fertilizer year might result in confusion and inequity of distribution.

Food Production Goals

Mr. Hutson, WFA, said that crop goals are under consideration but that ideas regarding the size of the goals are subject to change in accordance with change in demand due to emergency conditions. In general, the goals will probably be announced about the first of the year. Present indications point to increases as to some crops and decreases as to others. The congressional mandate for support prices for certain crops at 90 per cent of parity may be an important factor in determining the acreage of such crops.

Potash

WPB reported that the outlook for production of potash is not quite so good as it was two months ago, but that it is still the most abundant of the three primary plant foods. There has been an increase in the supply of muriate. The supply of sulphate may fall short of the demand. Arrangements may be made by which a fertilizer manufacturer may have muriate converted into sulphate at a plant at Louisville, Ky., at a cost of about \$4.00 per ton. The experimental run will start about the first of October and within a week thereafter there should be definite information as to whether the plan is feasible.

Chemical Nitrogen

WPB reported that since June the situation has deteriorated and is continuing to deteriorate. It is the present expectation that 530,000 tons of nitrogen, including 30,000 tons of organic nitrogen, will be available for fertilizer from this year's production. The shrinkage from earlier estimates is due principally to changes in War Department demands affecting solutions and ammonium nitrate. Cessation of hostilities in Europe may change the picture. The present estimate includes 500,000 tons of Chilean nitrate of soda. A shipping rating of A-3 has been obtained for 500,000 tons of Chilean nitrate; a rating of B-3 applies to 350,000 tons and an effort is being made to have this rating raised to A-3. An over-all importation of 1,000,000 tons is under con-

sideration. Importations last year were 597,000 tons. Consumption of fertilizer nitrogen last year, including organics, amounted to about 630,000 tons.

Practically all requests for delivery of solutions through August were fully met. However, only approximately 60 per cent of September requests for solutions were granted, and the outlook is that there will be available for October about 5 per cent less than for September. Last year's consumption of solutions was from 135,000 to 140,000 tons of nitrogen; this year's consumption is forecast at 59,000 tons of nitrogen.

The Minden, La., plant is the only Ordnance plant that is making any contribution of ammonium nitrate to fertilizer. The plant will operate and grain such ammonium nitrate solutions as Ordnance is in position to furnish. It is doubtful that military demands will permit the supplying of any solutions to this plant after this month. Present plans are that TVA production of ammonium nitrate for fertilizer will be reduced one-fifth in February and eliminated in March, its entire production going then to the Army. Canada agreed to increase its allocation of ammonium nitrate to the United States by about 20,000 tons. This additional amount will help the East. Dr. Ross, U.S.D.A., explained some recent developments in connection with bags for preserving ammonium nitrate in good condition.

Sulphate of ammonia supplies appear slightly higher than last year. An increase of 15,000 tons to be supplied by Canada will help in the West. The situation with respect to sulphate of ammonia, however, is tied in with the steel situation. If there should be, following collapse of Germany, a reduction in steel production, there would be a corresponding reduction in by-product sulphate of ammonia production. There was some discussion as to whether WPB should presently make an additional allocation of 50,000 tons of sulphate of ammonia in eastern United States. Officials stated that this amount could be allocated now, but if so it would not represent any additional production or tonnage but would come from the stockpile. The Committee made no recommendation on this point.

Ammonium phosphates, both grades, will show slight increases. Slight decreases are expected in the production of domestic nitrate of soda and uramon. Calnitro and A.N.L. will be somewhat reduced, about 50,000 tons being expected as against about 60,000 tons last year.

Oilseed Meals

WFA has received seventy-eight applications, covering 158 plants, for authorizations to acquire oilseed meal for fertilizer. (Last year the total number of applications was 176, covering 268 plants.) The initial authorizations to these applicants total approximately 27,500 tons. WFA suggests that it would be to the advantage of the industry as a whole and would contribute to agricultural welfare of those manufacturers who do not expect to use the entire amount included in their authorizations would release to WFA that part which they will not use. WFA would then be able to assign such released amounts to crops and areas where they are needed.

Superphosphate

The subcommittee's report pointed out that their May 9th estimate of 1944-45 superphosphate production was based on production of superphosphate from the regular supply of sulphuric acid plus sulphuric acid to be obtained from Ordnance—estimated at the rate of 40,000 tons, 100 per cent, per month. In view of the present uncertainty with respect to the availability of Ordnance acid, the subcommittee re-estimated the production of superphosphate to be made from the regular supply of sulphuric acid. On this basis the current year's estimated production of normal superphosphate, basis 18 per cent, was reduced approximately 1,368,000 tons. If distribution of Ordnance acid is resumed, the production of superphosphate will be increased accordingly. WPB reported that the War Department is willing to supply spent acid as they have it, but there is no way of forecasting the supply.

The estimate of triple superphosphate was revised downward by about 227,000 tons (basis 18 per cent) because of delay in completion of additional triple superphosphate manufacturing facilities.

The subcommittee now estimates that the total production of normal superphosphate (basis 18 per cent) and triple superphosphate (basis 18 per cent) for the present year will be 7,007,000 tons as compared with the actual production of both of these materials for last year of 7,542,106 tons, a decrease of 535,106 tons.

The subcommittee recommended that a correction be issued regarding the release of August 14, 1944, as follows: "Approximately 8,000,000 tons of superphosphate will be available to the American farmer for the fertilizer year of July 1, 1944 to June 30, 1945.

(Continued on page 24)

September Crop Report

Unusually abundant rains during August over most of the area between the Great Plains and the Appalachian Mountains added 172 million bushels to the prospective corn crop, boosted prospects for tobacco and sweet potatoes and helped cotton, peanuts, soybeans, and sorghums. Chiefly as a result of continued dry weather in the North Atlantic and Pacific Coast States and damage elsewhere from drought in early August, prospects for dried beans declined 10 per cent, and estimates for potatoes, dry peas, apples, sugar beets, rice, and buckwheat declined 1 to 4 per cent. Wet weather at harvest time caused some loss of wheat in the Dakotas. The net effect of changes during August was to improve national crop prospects about 2 per cent so that production now seems likely to be above production in any past year except 1942 and within 2 per cent of the all-time

record set in that outstandingly favorable season. Forecasts based on conditions reported September 1st indicated aggregate crop production about 4 per cent above production last year, 9 per cent above any year prior to 1942, and 22 per cent above the 1923-32 or "predrought" average.

Prospects continued to improve during early September and further improvement is to be expected if frosts hold off till the large acreage of late-planted crops can mature. Notwithstanding all the delays in planting last spring, all the local losses from drought this summer and all the vexatious handicaps and delays from wartime conditions, a few weeks of favorable weather could give the largest aggregate volume of crops this country has ever produced. It is evident that, in the main, farmers and their families have done their part well and others have helped where they could.

With more than normal rainfall during August in nearly all of the important corn producing States the crop is forecast at 3,101,000,000 bushels. This is 172,000,000 bushels above expectations a month ago and would exceed production in any past year except 1942. In the Dakotas heavy rains and losses in the shock have reduced wheat prospects nearly 16,000,000 bushels but the total U. S. wheat crop, now estimated at 1,115,000,000 bushels, is about 10 per cent larger than the great crop of 1915, the largest harvested up to this time. Sorghums harvested for grain are expected to total about 150,000,000 bushels compared with 112,000,000 bushels in 1941, the highest production to date. Adding the fairly large crops of oats and barley, the near record rice crop of 68,000,000 bushels, the larger than usual buckwheat crop and the small crop of rye, the total grain production now indicated totals 153 million tons compared with 143 million tons last year, 155 million tons in 1942, and a range of 120 million to 136 million tons during the previous five years.

When this large grain crop is harvested it should go far to relieve national feed shortages. It may affect the numbers of livestock and poultry kept, for if numbers next winter are reduced as much as indicated recently the farm supply of feed grains per unit of livestock would be as large as in any recent year. The hay crop is large and will be supplemented by a large crop of sorghum forage but there will be only about the usual hay supply in relation to livestock and there will be some local shortages in areas principally affected by drought.

(Continued on page 26)

Total Production (in Thousands)

Crop	Average 1933-42	1943	Indicated Sept. 1, 1944
Corn, all.....bu.	2,369,384	3,076,159	3,101,319
Wheat, all.....bu.	760,199	836,298	1,115,402
Winter.....bu.	570,675	529,606	786,124
All spring.....bu.	189,524	306,692	329,278
Durum.....bu.	27,413	36,204	35,503
Other spring.....bu.	162,112	270,488	293,775
Oats.....bu.	1,028,280	1,143,867	1,190,540
Barley.....bu.	256,350	322,187	290,036
Rye.....bu.	40,446	30,781	27,565
Buckwheat.....bu.	7,020	8,830	8,662
Flaxseed.....bu.	17,180	52,008	25,878
Rice.....bu.	49,626	70,025	67,950
Sorghums for			
grain.....bu.	65,362	103,168	149,962
Hay, all tame.....ton	75,320	87,264	83,833
Hay, wild.....ton	9,788	12,279	13,876
Hay, clover and			
timothy.....ton	23,759	29,238	28,146
Hay, alfalfa.....ton	27,765	32,465	31,775
Beans, dry			
edible.....100 lb. bag	15,133	21,123	17,686
Peas, dry field.....bag	3,148	10,870	8,915
Soybeans for			
beans.....bu.	68,771	195,762	179,024
Peanuts.....lb.	1,341,811	2,199,960	2,365,630
Potatoes.....bu.	362,912	464,656	377,589
Sweet potatoes.....bu.	67,182	72,572	68,754
Tobacco.....lb.	1,388,967	1,399,935	1,730,680
Sugarcane for			
sugar and seed.....ton	5,329	6,510	6,166
Sugar beets.....ton	10,094	6,522	7,204
Broomcorn.....ton	40	32	63
Hops.....lb.	39,024	42,297	46,765
Apples, commercial			
crop.....bu.	122,378	89,050	122,633
Peaches.....bu.	57,618	42,180	72,272
Pears.....bu.	28,559	24,585	29,225
Grapes.....ton	2,371	2,973	2,758
Pecans.....lb.	92,010	128,949	142,933

IT MAY BE

By SAMUEL L. VEITCH

FARM MACHINERY

Don't be surprised if farm machinery is one of the early items to be taken off rationing. In fact, machinery production this year is running just about even with 1940, which was a good year. The main holdup at present is malleable forgings and iron castings. This being due to labor shortage rather than the scarcity of materials. With the harvesting season about over, WFA is strong for lifting rationing as soon as possible.

U. S. D. A. GOSSIP

It may be, if Dewey is elected, the new Secretary of Agriculture would be Milton Eisenhower, brother of General "Ike." He has lots of experience, having cut his eye teeth in U. S. D. A. back in the '20's, when Jardine was Secretary of Agriculture, and later on served as press chief. From there he became land use coordinator under Secretary Wallace and then Director of Extension under Secretary Wickard. Following this he completed a tour of duty with War Relocation Authority and Office of War Information. Eisenhower is now President of the Kansas State College.

WAR VIA AIR WAVES

Have you ever given any thought to the war of words coming over the radio? Well, here is what's going on in the "war of words." Today, there are 600 programs daily in 47 languages, coming from 360 transmitters in all parts of the world. Germany broadcasts propaganda 24 hours a day in 30 languages. Nearly 2,000 persons are engaged in this business and programs are designed to reach Arabs, sailors, women, prisoners, and every other group of people. Japan has 47 programs daily covering the Asiatics residing in the lands which she has overrun. Russia transmits 25 news programs daily in 25 languages. Great Britain leads with 107 newscasts daily designed in the main for European countries. Enemy programs are directed to all parts of the world. In a single day, two and one-half million words in every language and dialect hurtle through thousands of miles of space to carry propaganda. It is the equivalent of 25 full length books.

They serve three broad purposes, i. e., as news, to bolster the morale of their own

forces, and to impair enemy morale. Part of our business today is to monitor and listen to this war of words, select that which might have military value and send it to the proper authorities.

A good example of the power of words was recently demonstrated in the feat of Captain William J. Adams, who captured 156 Nazi prisoners, during the invasion of the Cherbourg Peninsula. When Captain Adams piloted his crippled glider to the ground, he had the misfortune of setting it down near a Jerry mortar battery. Typical of our American soldiers, he was resourceful. He literally talked himself out of trouble, telling his captives, mostly Russians, Poles and Czechoslovaks, who had been conscripted by the Nazis, about the wonders of the United States. The captors, some of whom looked scarcely over 13 or 14 years of age, had been told that their throats would be slit by Americans if they were taken. Words, more powerful than swords, convinced them otherwise, and planted seeds of Democracy that will live forever.

SURPLUS PROPERTY

Recently, the House passed the Surplus Property Disposal Bill; the next day the Senate passed a bill dealing with the same problem. There are a number of differences between the Senate and the House versions. (What's new about that?)

The so-called Reconversion Bill is being debated. There are wide discrepancies between the bill as reported by the House Ways and Means Committee and the bill passed by the Senate. This is just another way of saying both bills are due for a political bouncing around.

RECONVERSION REPORTS

It may be rather confusing when you hear the various reconversion reports coming out of Washington. They should start from now on. No doubt, November will most likely be about the time transition will take place (allowing for the German war being over some time in October). The help situation should improve at that time as it is estimated several millions will be out of war jobs within thirty days after Germany folds up.

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New Cottonseed Order Issued

War Food Order 113 (cottonseed), effective September 8, 1944, specifies the conditions under which 1944-crop cottonseed may be bought and used by processors, manufacturers, seed dealers, ginner, recognized handlers, and others.

The order is an extension of War Food Order 28 applicable to the 1943 crop. Its provisions are designed to facilitate the prompt and orderly marketing of the 1944 cottonseed crop, to discourage the withholding of cottonseed for speculative or other abnormal market operations, and to prevent the purchase and use of cottonseed for feed and fertilizer.

War Food Order 113 prohibits any processor, manufacturer, or seed dealer from purchasing or accepting delivery of 1944-crop cottonseed in a quantity greater than his manufacturing or sales requirements for the period ending August 15, 1945. This provision is for the purpose of assuring maximum production of cottonseed oil and oil meal during the 1944-45 cottonseed marketing season.

Provisions designed to discourage the withholding of cottonseed for speculative purposes include a prohibition that no ginner or recognized handler shall have on hand at any time more 1944-crop cottonseed than he has contracted to sell to processors, manufacturers, and seed dealers, plus the quantity of 1944-crop cottonseed bought by him during the immediately preceding thirty days or thirty tons of cottonseed, whichever is the greater.

The order prohibits any person other than a processor, manufacturer, seed dealer, ginner or recognized handler from acquiring cottonseed in excess of the quantity needed to meet his planting requirements. It also prohibits any person from buying or accepting delivery of cottonseed in whole or ground form for use as, or manufacture into, feed or fertilizer.

An exception is that damaged cottonseed acquired by insurance companies or underwriters' salvage companies may be sold for feed or fertilizer if the cottonseed is unsuitable for processing, manufacturing, seed sale or planting purposes.

War Food Order 28, which restricted purchases and use of 1943-crop cottonseed, has been terminated as of September 8, 1944, by the War Food Administration. The termination has been ordered because little cottonseed now remains from the 1943 crop. War Food Order 28 was issued September 15, 1943.

Brand Contributes Industry Review for Encyclopedia Britannica

It will be of interest to fertilizer men to know that, in addition to his many duties as Executive Secretary and Treasurer of the National Fertilizer Association, Charles J. Brand prepares each year for the *Encyclopedia Britannica* the article covering fertilizer developments during the current year. This is included in the volume issued each year as a supplement to the main *Encyclopedia*. In the 1944 volume, Mr. Brand reviews the effect of the war on the fertilizer situation throughout the world, covering the principal sources of phosphates, potash and other materials. In addition he summarizes current U. S. production problems and prospects for fertilizer production in the coming year. The industry is capably represented by this accurate review by Mr. Brand.

Obituary

Walter S. Landis

Dr. Walter S. Landis, vice-president of the American Cyanamid Company, died on September 15th from a heart attack while removing hurricane debris from the grounds of his home at Greenwich, Conn. He was sixty-five years of age.

Dr. Landis, who was one of the outstanding scientists of this country, graduated from Lehigh University as a mechanical engineer. After teaching at the University for several years, in 1912 he joined the staff of the American Cyanamid Company as chief technologist.

Throughout his career, Dr. Landis gave most of his time and effort to the problems of nitrogen fixation, ammonia oxidation and products from the cyanamid process, and over fifty patents were the result of his work. He received many honors from the leading scientific societies, among them the Chemical Industry Medal in 1936, the Perkin Medal in 1939 and the American Institute of Chemists' Medal in 1943.

He is survived by his wife and two sons.

Eugene E. Newhouse

Eugene E. Newhouse, owner of the Newhouse Chemical Co. and manager of the Arkansas Fertilizer Co., died at his home in Little Rock, Ark., on August 21st. Mr. New-

house was one of the pioneers of the fertilizer industry in the Southwest, having joined the Arkansas Fertilizer Co. in 1913. For many years he was a regular attendant at the conventions of the National Fertilizer Association and was well known and well liked throughout the industry.

New Ceiling on Castor Pomace in Far Western States

A maximum price of \$4.50 per unit of ammonia for castor pomace in bags, f. o. b. point of production west of the 100th meridian, was announced on September 21st, by the Office of Price Administration. The 100th meridian runs through the states of North Dakota, South Dakota, Nebraska, Kansas and Texas.

The new ceiling, effective September 25, 1944, reflects the higher transportation charges on castor beans shipped from New Orleans to the west coast.

The price of \$2.90 per unit of ammonia in castor pomace produced east of the 100th meridian remains unchanged. Most of this by-product is produced around New York City.

The measure maintains a maximum price of \$15.50 per ton for unground castor cake in bags, f. o. b. point of production.

Textile Bags for Fertilizer

Textile bags of any type may not be sold or delivered in quantities of 1,000 or more unless the buyer certifies on his purchase order or contract that he will use the bags only for the purposes permitted by the textile bag order, M-221, the War Production Board said on September 12th.

M-221, as amended, requires that the buyer certify as follows: "The undersigned purchaser certifies, subject to criminal penalties for misrepresentation, that he is familiar with Order M-221 of the War Production Board, and that all purchases from you of items regulated by that order, and the use of the same by the undersigned, will be in compliance with the order, as amended from time to time."

This certification, once it has been filed by a purchaser with a supplier, will cover all future deliveries from that supplier to the same purchaser.

The amended order states, however, that the restrictions on the use of new burlap bags

do not apply to surplus new military sand bags.

The complete list of products which may be packed in new burlap bags, as given in the amended order, comprises agricultural products, crushed oyster shells, fertilizer, meat, mohair, petroleum waxes, stearic acid, edible or inedible tankage, wool or wool products, and chemicals for export.

The order further provides that new open-mesh bags made of cotton or twisted paper yarn, as well as the previously permitted new cotton bags, may be used to pack agricultural products, chemicals, cement, coins, currency, fertilizer, glue, gypsum, malt, meat, abrasives, paste, plaster, samples, sand, securities, shell fish, small parts, edible or inedible tankage, tire chains, or such other uses as WPB may authorize in writing.

August Tax Tag Sales

Fertilizer tax tag sales in August in seventeen reporting States represented 271,000 equivalent tons, compared with 266,000 tons a year ago, and 212,000 tons two years ago. Although sales for August are only 2 per cent above August, 1943, they still remain at a high level—28 per cent above August, 1942.

There was a substantial increase in all Mid-western States with the exception of Indiana which was marked by a sharp decline. The tonnage in most Southern States increased with the exception of Mississippi and Arkansas, both States declining drastically.

Sales in nine out of the seventeen reporting States were smaller in the first eight months of this year. Aggregate sales in the seventeen States over January-August, 1943, were 46,000 tons less but 634,000 tons more than January-August, 1942.

FERTILIZER TAX TAG SALES

STATE	AUGUST				JANUARY-AUGUST		
	1944 Tons	1943 Tons	1942 Tons	% 1943	1944 Tons	1943 Tons	1942 Tons
Virginia.....	35,342	22,783	17,350	107	376,835	352,882	340,218
North Carolina.....	11,832	4,200	10,304	97	1,065,193	1,094,485	1,046,587
South Carolina.....	4,550	4,320	4,010	89	624,523	700,768	611,294
Georgia.....	12,745	4,754	3,570	99	866,861	876,829	731,950
Florida.....	47,979	30,507	14,280	116	567,294	489,971	411,258
Alabama.....	9,200	3,500	1,300	89	557,400	623,050	555,750
Mississippi.....	5,030	44,050	6,000	81	306,664	379,044	287,067
Tennessee.....	15,814	8,439	6,225	114	219,080	192,653	150,180
Arkansas.....	1,500	16,000	1,350	66	103,483	156,975	129,308
Louisiana.....	1,050	750	400	93	134,720	145,188	135,436
Texas.....	1,703	892	815	107	140,573	131,127	110,118
Oklahoma.....	2,300	2,000	450	84	14,351	17,088	7,761
Total South.....	149,045	142,195	66,054	96	4,976,977	5,160,060	4,516,927
Indiana.....	46,927	76,290	102,212	88	316,088	357,530	350,933
Illinois.....	17,250	8,143	9,393	162	124,540	76,744	71,778
Kentucky.....	20,773	11,501	7,735	153	207,294	135,501	126,827
Missouri.....	32,934	24,444	25,389	150	113,238	75,260	62,249
Kansas.....	4,500	3,563	1,455	275	32,746	11,904	7,760
Total Midwest.....	122,384	123,941	146,184	121	793,906	656,939	619,547
Grand Total.....	271,429	266,136	212,238	99	5,770,883	5,816,999	5,136,474

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FERTILIZER MATERIALS MARKET

NEW YORK

Sulphate of Ammonia Production Slightly Lower. More Imports of Nitrate of Soda Planned. Other Materials Show Production Maintained But No Surplus Accumulating.

Exclusive Correspondence to "The American Fertilizer"

NEW YORK, September 19, 1944.

Sulphate of Ammonia

There has been a slight falling off in the production but material has been moving steadily from plants against allocations so that the situation remains firm.

Nitrate of Soda

It is expected that the importations of this material from Chile for the new season will be increased considerably over the 1943-44 imports and it is expected that the increase will be at least 33½ per cent, which may be further increased if it is found that this material is needed and provided shipping space is available.

Superphosphate

Production has been maintained but there is no indication that there will be any surplus of this material during the new season.

Potash

Production is being maintained and deliveries are being made against contracts regularly from practically all sources against WPB allocations previously made.

Phosphate Rock

Shipments have continued regularly against contracts. Miners are hoping that they will be able to maintain production and are watching the labor situation closely.

Gage Retires from Swift and Co.

J. R. Gage, manager of the Baltimore office, Swift & Company Fertilizer Works, retired on July 11th under the company's regular retirement plan, after 33 years of service. Mr. Gage is succeeded as manager by A. N. D'Aubert who was transferred from New Orleans.

BALTIMORE

Labor Shortage Slows Fall Season. Superphosphate Production Lower. More Nitrate of Soda Imports Expected.

Exclusive Correspondence to "The American Fertilizer"

BALTIMORE, September 19, 1944.

The fall shipping season is still being hampered by shortage of labor with no relief in sight before the end of the season.

Ammoniates.—While there has been a slight easing up in the demand for feeding purposes, the ceiling price for fertilizer material makes tankage and blood almost prohibitive for use in mixtures.

Castor Pomace.—Producers are still well sold up and not taking on additional business, but are endeavoring to take care of their regular trade.

Fish Scrap.—The catch continues light and the market remains unchanged at ceiling price.

Sulphate of Ammonia.—On account of recession in production, the output of sulphate of ammonia has decreased slightly, and such tonnage as is available is being allocated.

Nitrate of Soda.—Deliveries are still under control of Governmental agencies, but it is anticipated that, on account of demand for nitrogen for munition purposes, there will be an increased quantity of Chilean nitrate imported this year to take care of agricultural requirements. The market remains unchanged.

Superphosphate.—With shortage of labor as well as scarcity of sulphuric acid the production of superphosphate has fallen off somewhat, and if this continues there is likely to be a shortage by the time next spring season rolls around. Ceiling price of 65 cents per unit of A. P. A., in bulk, f. o. b. producer's works, is still effective.

Potash.—Domestic manufacturers are making deliveries against contracts previously booked, and it is anticipated there will be

Fertilizer Materials



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sufficient to go around for the next spring season for manufacturers' legitimate requirements.

Bone Meal.—Both raw and steamed bone meal are scarce and the major portion of production is used for feed instead of fertilizer purposes, as the market has reached a point where it is unprofitable for fertilizer purposes.

Bags.—While the market on new burlap bags for fertilizer remains unchanged, allocations of heavy weight burlap such as is used by fertilizer manufacturers has been curtailed for the last quarter of this year, which would indicate that there will probably be a tight market for burlap bags for the coming spring season.

CHARLESTON

Good Cotton Crop Expected. All Materials Except Potash Are in Short Supply.

Exclusive Correspondence to "The American Fertilizer"

CHARLESTON, September 19, 1944.

Cotton crop in the Southeast is unusually good and the yield per acre gives every promise of being better than the average of the last few years.

Organics.—These continue exceedingly scarce and so far the cottonseed oil mills generally have not been disposed to offer to fertilizer manufacturers their allocations on cottonseed meal.

Ammonium Nitrate.—Even though tentative plans have been made for the importation of 850,000 tons of Chilean nitrate for the 1944-45 season, fertilizer manufacturers are seriously worried over the shortage of mineral nitrogen since production of Ordnance ammonium nitrate has been stopped.

Ammonia Solutions.—Fertilizer manufacturers are still short on their needs of solutions and this is holding up the manufacture of ammoniated base.

Potash.—This is one material on which the fertilizer manufacturers apparently have no complaint as to deliveries so far.

CHICAGO

Fertilizer Organic Market Tight With No Price Reductions. Some Price Concessions on Second Grade Feed Tankage.

Exclusive Correspondence to "The American Fertilizer"

CHICAGO, September 18, 1944.

No changes can be reported in the tight organic market. Uncertainty over war developments has made no impression on ceiling prices. All such material placed on the market finds ready buyers without price consideration.

Demand for good grade wet rendered tankage at ceiling remains active, although on second grades, price concession must be made to consummate business.

Ceiling prices are:

High grade ground fertilizer tankage, \$3.85 to \$4.00 (\$4.68 to \$4.86 per unit N) and 10 cents; standard grades crushed feeding tankage, \$5.53 per unit ammonia (\$6.72 per unit N); blood, \$5.53 (\$6.72 per unit N); dry rendered tankage, \$1.25 per unit of protein, f. o. b. producing points.

TENNESSEE PHOSPHATE

Phosphate Strikers Back at Work. Floods Hamper September Shipments of Ground Rock. More Bulk Shipments Reported.

Exclusive Correspondence to "The American Fertilizer"

COLUMBIA, TENN., September 17, 1944.

The striking workers of the International Minerals & Chemical Corporation's Mt. Pleasant plant returned to work last week, leaving to the War Labor Board the settlement of their differences with the management as to the right to discharge men refusing to work when called. Operations by this company are back in normal course.

Manufacturers
Sales Agents for **DOMESTIC**

Sulphate of Ammonia

Ammonia Liquor :: Anhydrous Ammonia

HYDROCARBON PRODUCTS CO., INC.

500 Fifth Avenue, New York

The weather of the past two weeks has been ideal and crops of all kinds have responded to the fall rains in magnificent shape, except for those early planted crops which were too far gone to receive any benefit. Farmers generally, however, are in good shape.

Practically one-third of September shipments of ground rock for direct application were cut off by the flood about September 1st and by numerous breakdowns accompanying efforts to start up thereafter. All now seem to be in good shape again and shipments of all grades to all consuming channels are proceeding with maximum speed.

Notable increase is evident in the number of farmers learning to accept bulk shipments instead of insisting on bags. Of course, the farmers are just as badly off in manpower troubles as the phosphate shippers in Tennessee, but when they realize that frequently they can get bulk shipments when bagging is impossible, they equate the increased trouble of handling bulk against the enormous cost of not having phosphate at all.

Quite a large number of experimental demonstrations are being planned by many State Experiment Stations, to be carried out after war emergency conditions permit, which it is hoped will do much to clear the atmosphere in many circles as to the real value of finely ground phosphate rock for proper use on proper soils for the right crops, and result in permanent increase of farmer use of both ground phosphate rock and superphosphate as well as mixed goods.

Potash Production Increasing

The five major American producing companies delivered in the United States, Canada, Cuba, Puerto Rico, and Hawaii during the second quarter of 1944 a total of 321,321 tons of potash salts containing an equivalent of

174,896 tons K_2O , according to data released by the American Potash Institute. This was an increase of 7.5 per cent in salts and 9 per cent in K_2O compared to the same period in 1943. Deliveries for agricultural use amounted to 289,115 tons of salts, equivalent to 154,802 tons of K_2O made up of 223,868 tons muriate of potash, 33,541 tons of manure salts and 31,706 tons sulphate of potash and sulphate of potash magnesia. For chemical use deliveries amounted to 32,206 tons of salts with an equivalent of 20,094 tons K_2O .

During the first six months of 1944 total deliveries amounted to 746,907 tons of salts, containing an equivalent of 389,290 tons K_2O . These represent an increase of 14.6 per cent in salts and 13.6 per cent in K_2O over the same period in 1943. Potash for agricultural use totaled 680,745 tons of salts, containing an equivalent of 348,032 tons K_2O . This represents an increase of 15.4 per cent in salts and 14.7 per cent in K_2O . There were 484,290 tons muriate of potash, 128,280 tons manure salts and 68,175 tons sulphate of potash and sulphate of potash magnesia making up the agricultural deliveries. The chemical industries acquired 66,162 tons of salts, containing an equivalent of 41,258 tons K_2O . These represent increases of 6.9 per cent in salts and 5.1 per cent in K_2O over the first half of last year.

POTASH DELIVERIES

Short Tons K_2O				
(United States, Canada, Cuba, Hawaii, Puerto Rico)				
	Jan.- June 1944	Jan.- June 1943	Apr.- June 1944	Apr.- June 1943
Muriate.....	290,423	256,934	134,393	119,471
Manure Salts....	31,842	21,796	8,388	6,512
Sulphate and Sul.				
Pot. Mag.....	25,767	24,583	12,021	13,328
Total Agri....	348,032	303,313	154,802	139,311
Chemical.....	41,258	39,257	20,094	21,071
Grand Total...	389,290	342,570	174,896	160,382



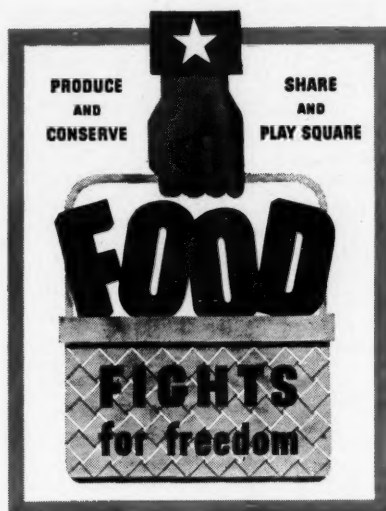
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September Cotton Crop Report

A United States cotton crop for 1944 of 11,483,000 bales of 500 pounds gross weight is forecast by the Crop Reporting Board of the United States Department of Agriculture, based upon information as of September 1st. This is an increase of 461,000 bales or 4.2 per cent above the forecast as of August 1st, and compares with 11,427,000 bales produced in 1943 and the 10-year (1933-42) average of 12,455,000 bales. Lint yield per acre is estimated at 273.4 pounds on 20,164,000 acres for harvest. The 1944 yield per acre would be slightly larger than the previous all-time record of 272.4 pounds per acre produced in 1942.

Increases above a month ago are indicated for all major cotton States excepting North Carolina, Texas and Oklahoma. In Oklahoma, where record yields were in prospect on August 1st, continued drought and excessive

heat reduced prospective production 80,000 bales. Rains which came late in August were not early enough to overcome the adverse effects of the drought in that State. In most of Texas it was also very dry and hot, but rainfall during the last half of August was apparently sufficient to overcome previous deterioration.

In the Southeastern States and in the Mississippi River Delta States growing and harvesting conditions were good during August and cotton crop prospects are generally improved. Plants are small but are unusually well fruited. Boll weevil infestation is much lighter than average but leaf worms are appearing in considerable numbers in some areas.

Assuming the ratio of cotton lint to cottonseed to be equal to the average for the past five years, production of cottonseed is indicated at 4,762,000 tons.

The report from the Bureau of the Census shows 576,142 bales of cotton ginned from the crop of 1944 prior to September 1st, compared with 1,785,245 for 1943 and 739,005 for 1942.

Production (Ginnings)*
500 lb. Gross Wt. Bales

State	Average 1933- 1942	1943 Crop	1944 Crop Indicated Sept. 1
	Thous. bales	Thous. bales	Thous. bales
Missouri.....	343	295	325
Virginia.....	29	24	27
N. Carolina.....	613	596	710
S. Carolina.....	759	696	775
Georgia.....	997	847	755
Florida.....	25	16	14
Tennessee.....	493	491	525
Alabama.....	1,011	959	890
Mississippi.....	1,609	1,841	1,900
Arkansas.....	1,314	1,122	1,250
Louisiana.....	617	739	565
Oklahoma.....	653	384	660
Texas.....	3,273	2,823	2,450
New Mexico.....	108	108	116
Arizona.....	182	131	149
California.....	411	341	355
All other.....	18	14	17
United States....	12,455	11,427	11,483
Amer. Egypt†....	29.1	60.9	8.1

*Allowances made for interstate movement of seed cotton for ginning.

†Included in State and United States totals. Grown principally in Arizona, New Mexico, and Texas.

New Phosphate Book Published in England

A new book entitled *Phosphates and Superphosphate* by A. N. Gray has been published in London under the auspices of the International Superphosphate Manufacturers Association. A previous edition had been published in 1930. This volume, which contains 416 pages, gives a very comprehensive survey of the world-wide phosphate and superphosphate industry, with statistics for every producing and consuming country, so far as was conditions make this possible.

Among the subjects covered are: Phosphate deposits and reserves; grades of phosphates; production methods of superphosphate; superphosphate production cost; concentrated superphosphate; calcined phosphates; phosphate of ammonia; basic slag; phosphoric acid. About 150 pages are devoted to phosphate and superphosphate statistics by countries. The book is distributed by H. K. Lewis & Co., Ltd., 136 Gower St., London, W. C. 1, and is priced at 21 shillings.

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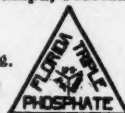
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See Page 4



INDUSTRY ADVISORY COMMITTEE PLANS FOR COMING SEASON

(Continued from page 11)

This compares with 6,800,000 tons available from July 1, 1943 to June 30, 1944 fertilizer year." The report was accepted by the Committee.

Report of the Fertilizer Subcommittee

The recommendations made by WFA to WPB with respect to the distribution of cyanamid, ammo-phos, uramon, and of nitrate of soda prior to November 1st, met with the approval of the subcommittee. The suggestion was made that future recommendations should be more direct regarding the distribution of uramon, thereby eliminating the possibility of confusion among fertilizer manufacturers.

The question of allocating nitrate of soda by periods of three months and six months was discussed, but the subcommittee deemed it advisable that the present system of monthly allocations be continued by WPB.

The subcommittee found that certain areas, particularly in the southern part of the United States, were lagging in the early acceptance of fertilizers. In its opinion the campaign for early movement in that area should be conducted along the line that is being used in Ohio by State officials. The suggested theme of the campaign should be "unless you accept early delivery of fertilizers you will create a shortage." Immediate publicity of the actual supply position of both nitrogen and superphosphate, together with the labor situation, should be given in order to promote the early movement. Statements that "ample fertilizers will be available" should be avoided, because early movement is an essential factor in realizing fertilizers in sufficient supply. Such statements retard early deliveries.

Information that inventories of sulphate of ammonia are increasing in certain producing plants indicates that allocations may be "stepped up," particularly at this time, when there is an apparent diminution in the supplies of nitrogen solutions and ammonium nitrate.

Recognizing that potash is in somewhat better supply than in recent years, and the unfilled demand as well as agronomic need for increased potash use in some areas and for certain uses, the subcommittee recommended that the industry offer potash salts for consumer purchase and that the industry likewise plan to offer a larger volume of mixtures with higher potash ratios. The report was accepted by the Committee.

Labor

It was pointed out that WFA advised fertilizer manufacturers on August 18th as to appointment of WFA representatives to serve on local Production Urgency Committees and Manpower Priority Committees. It was suggested that members of the industry get in touch with these representatives as to their problems. The Chemicals and Fertilizers Branch will continue to act in a liaison capacity. Mr. Worman in the Northeast and Mr. Nunnally in the Southeast will continue to function in connection with labor problems and will cooperate with the local WFA labor representatives in working out individual problems of fertilizer manufacturers.

Gasoline

WFA has been earnestly working on the problem of obtaining additional gasoline mileage for agricultural service industries, and presented to OPA what seemed to be a justifiable case. While the meritorious nature of the claim was recognized, OPA took the position that the proposal could not be put into effect at this time because it would create too great a drain on over-all civilian supplies. WFA is continuing its efforts with the expectation that as and when the fighting in Europe ceases some relief in this respect will be promptly forthcoming.

Post-War Establishment of Grades

Several of the State agronomists present at the meeting pointed out the desirability of continuing the restriction of grades when the war and the wartime authority of WFA to prescribe grades have been ended. It was stated also, on behalf of WFA, that that agency would like to promote the retention of

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If we all are like Mrs. Jones, there will be no inflation with skyrocket

prices. If we all are like her, dangerous Black Markets cannot exist.

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3. Pay willingly any taxes that your country needs. (They are the cheapest way of paying for the war.)
4. Pay off your old debts—avoid making new ones.
5. Don't ask more money for the goods you sell or for the work you do. Higher prices come out of everybody's pocket—including *yours*.
6. Establish and maintain a savings account; maintain adequate life insurance.
7. Buy all the War Bonds you can—and hold 'em!

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US
KEEP**

PRICES DOWN

Use it up . . . Wear it out . . . Make it do . . . Or do without

A United States War message prepared by the War Advertising Council, approved by the Office of War Information, and contributed by this magazine in cooperation with the Magazine Publishers of America.

approved grade lists. It was pointed out that in some States provision is made by State law for the restriction of grades by some official or group of officials. In other States much is accomplished through educational work in grades recommended by the agronomists. Mr. Bagwell, an attorney from the office of the Solicitor of U. S. D. A., commented on possible implications of antitrust law violation if grades should be limited by agreement participated in by manufacturers. After discussion the Committee voted to express approval of retaining the "approved grades" principle; that continuation should be on a State basis; and that agronomists should discuss their grade recommendations with fertilizer manufacturers.

OPA Fertilizer Pricing

OPA reported that in connection with Second RMPR 135 several matters are under consideration, some or all of which may be covered in an amendment to the regulation. Two of such matters concern the country as a whole: (1) Clarification of maximum prices in sales by fertilizer manufacturers to independent dealers who take title to the goods; and (2) clarification as to instances where the f. o. b. price plus transportation cost exceeds the delivered maximum price.

Others of such matters have only sectional interest: (1) trucking rates out of Baltimore into northern Virginia; (2) maximum prices at interior warehouses not located on railroads (concerns southeastern operators); (3) maximum warehousing charges on nitrogenous materials in the Southeast and South; (4) maximum retail price of imported ammonium nitrate at interior locations in Southeast; (5) revision in certain California zones; (6) discounts applying to carload shipments of nitrogenous materials in the Middle Atlantic States and the Northeast; (7) maximum prices on materials, principally superphosphate, sold in the Yuma district of Arizona.

It was stated also that there is some confusion as to the effect of maximum pricing by OPA. The establishing by OPA upon request of a manufacturer of a maximum price for a grade of fertilizer does not legalize the production or sale of that grade. The determination as to what grades may be legally made or sold is a function of the War Food Administration, which agency has set up the list of legal grades in War Food Order 5. (It is the understanding that OPA feels that it has no authority to require grade simplification unless the operations of the industry should become so unprofitable as to require consideration by OPA in the interest of production, and then only

as a matter of manufacturing economy and in lieu, in whole or in part, of an increase in maximum prices.)

OPA does not now contemplate any substantial increases or decreases in maximum prices for fertilizers during the current year.

The next meeting of the Committee will be held on Wednesday, November 15, 1944.

SEPTEMBER CROP REPORT

(Continued from page 12)

As now estimated, both in yield per acre and in total production the tobacco crop would be the second highest on record. The indicated yield of cotton is above past records and the expected crop is close to the average during the last half dozen years. Dried beans, peas, and flaxseed crops are all fairly large compared with pre-war production but substantially below last year.

Total prospective fruit production for this season changed very little during August. A slight decrease in commercial apples was more than offset by increases in other deciduous fruits. Aggregate tonnage of the eight major deciduous fruits (apples, peaches, pears, grapes, cherries, plums, prunes and apricots) is indicated to be 21 per cent greater than the 1943 production and 10 per cent greater than the ten-year (1933-42) average. Prospects are favorable for citrus crops in all producing States and conditions on September 1st indicated an aggregate tonnage of oranges, grapefruit, lemons, limes and tangerines from the 1944 bloom fully as large as the record production from the 1943 bloom. The prospective aggregate production of fruit (deciduous and citrus combined) in the 1944-45 season is 10 to 15 per cent greater than production in the 1943-44 season.

Combined production of the four important tree nuts (walnuts, pecans, almonds and filberts) is indicated to be about 15 per cent

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above 1943 and 47 per cent above the ten-year average.

It now appears that the aggregate tonnage of commercial truck crops for the fresh market in 1944 (winter, spring, summer and fall seasons combined) will exceed the previous high record of approximately seven million tons in 1942 by about 11 per cent—slightly less than was indicated a month ago. If present indications are borne out, the tonnage this year will exceed that of last year by about 18 per cent and the ten-year (1933-42) average by 22 per cent. A new record is indicated for each seasonal group this year with the heavier increases having occurred in the winter and spring seasons. Summer and fall tonnages are indicated to exceed the previous records by 3 and 2 per cent, respectively. Compared with last year, however, summer production should be up about one-fifth.

Rains during the last half of August temporarily relieved the drought in most of the areas producing summer and early fall vegetables but on September 1st more moisture was needed in most northeastern and in some north central areas to finish late maturing crops satisfactorily. Market vegetables which are expected to show new high records for commercial production this year include cabbage, lettuce and onions.

On September 1st, an appraisal of the 1944 production prospects for eight important vegetables for processing (snap beans, green peas, sweet corn, tomatoes, beets, lima beans, kraut cabbage and pimientos) indicates an aggregate tonnage about 10 per cent above the 1943 production of these crops and 51 per cent more than the average quantity estimated for the 1933-42 period.

Despite the hot, dry August weather that hindered the development of many unharvested processing vegetables, indications for tomatoes on September 1st point to the production of 3,173,800 tons for 1944, or about 19 per cent more tonnage than the 1943 production of 2,659,100 tons. On the other hand, sweet corn production prospects were reduced 10 per cent from the August 1st indicated crop of 1,221,200 tons and it is now expected that 1,097,300 tons will be produced this year compared with 1,162,000 tons har-

vested in 1943. The preliminary estimate of production of green peas for canning and freezing shows 365,660 tons for 1944. This is 10 per cent below the 1943 production of 407,030 tons. During the month, little change took place in the 1944 production prospects for snap beans and 258,100 tons are in prospect for 1944 compared with 261,900 tons for 1943.

OUTLOOK FOR POST-WAR PROSPERITY

(Continued from page 9)

industry, with prolonged depression as the aftermath.

In view of what we have learned during the war about our enormous productive capacity, I am confident that the people of this country, our industrial war workers, our professional and white-collar people, our farmers and our businessmen . . . to say nothing of our returning soldiers and sailors . . . will never again be content to go back to 1936 or 1938 or even 1940. Even at 1940 levels of production, and wages, estimates are that there would be 19½ million unemployed.

I doubt personally whether our democratic system of government can stand up intact under the pressure politics resulting from a struggle between determined groups who would unquestionably seek to protect their own interest if there aren't enough jobs and goods to go around.

Therefore, it seems to me that we who have had experience in business and in government share a responsibility to put into actual practice the lessons we have learned from the great industrial and merchandising leaders of this generation.

That lesson, it seems to me, is that the major share of reductions in costs of production resulting from increasing efficiency must be handed on to the consumer in the form of lower prices and to workers in the form of higher wages. Both low prices and high wages are essential for the development of mass markets. It is an experience which strongly suggests that small profit margins on a large volume of production not only serve the interests of our whole system, but provide larger profits to the owners and managers of business than the opposite policy of high

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prices, high unit profits and restricted production.

There is one big opportunity for business right there, it seems to me, an opportunity and a responsibility to get those prices as low as possible . . . to tap larger and larger markets and to build volume and thus create more and more jobs. That approach to post-war America will in the large majority of cases lead to larger profits and a sounder business. It will contribute just that much to overall prosperity.

That is a responsibility business has within its own shop. But if we're going to reach our goal, businessmen will want to take a greater interest than ever in the farmer and see what ways and means can be devised to see to it that farm income is maintained at as nearly its present high level as constructive thinking and planning can assure. A poor farm economy can only wither the size of national markets.

Agriculture Prices Must Be Sustained

If we set our sights on a civilian economy 50 per cent larger than we have today, we must take steps to see that agricultural markets and prices are sustained. The maintenance of full production and employment in the cities will go a long way toward making this possible.

The farmer, through his own organizations, can also help himself a great deal to meet this problem, but in the last analysis it seems to me that the Government must itself be prepared to assure the conditions for farm prosperity . . . for the sake of the farmer, for the sake of the large market he provides for business.

That, I think, is one of the spots where wise Government action can be a tremendous aid to post-war prosperity. There are, of course, many others. And I am not thinking of restrictive controls when I say wise Government action. I am thinking rather of measures which can be taken to encourage and stimulate business and to maintain markets for business, so that businessmen will be planning in terms of markets which demand high levels of production and employment.

Of course, Government control cannot ever generate the spark that motivates the economic system. But intelligent business, I think, needs intelligent Government to help create the proper climate for prosperity. The Government, I think, can help industry, agriculture and labor to make full use of the improvements in methods of production which have developed during the war. If

these instruments are used boldly and quickly, it is highly probable that they will not have to be used extensively. If business, agriculture and labor recognize that the Government is fully prepared to help in maintaining high levels of production and employment, all three groups will, of themselves, make the decisions which contribute toward this objective. If workers are not constantly faced with the fear of unemployment, they will spend their earnings and thus provide the markets for the goods which they produce. If agriculture is assured that its markets and prices will be supported, it will plan to produce the food and textiles which our people need and will be able to buy if industry is running in high gear.

In summary, a choice between two alternatives faces us. If we fumble the ball and make no concerted cooperative effort to reach the common goal of making full use of our productive capacity, we face a future of unemployment and chronic depressions. Pressure groups, including a large body of disillusioned soldiers, will then be waging a desperate fight over the distribution of a meager scarcity.

But if we look back just long enough to remind ourselves of what a production job we've performed in this war and what that job has meant in terms of employment and markets for business, and then look forward and devise ways to turn that same capacity to operate in peacetime America, we'll have an economy running along at 150 billion dollars and up. Let's not say we can hit those levels only in time of war. Let's not be satisfied with the use of only half our resources, our brains and productive power. But let's set our sights high. Let's get farmer, laborer, businessman, etc., and Government each to put shoulder to the wheel. If each does that intelligently and vigorously, we'll reach the goal.

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Gascogne & Co., Baltimore, Md.

Shuey & Company, Inc., Savannah, Ga.

Stillwell & Gladding, New York City.

Wiley & Company, Baltimore, Md.

CONDITIONERS AND FILLERS

American Limestone Co., Knoxville, Tenn.

Keim, Samuel D., Philadelphia, Pa.

Phosphate Mining Co., The, New York City.

COPPER SULPHATE

Tennessee Corporation, Atlanta, Ga.

COTTONSEED PRODUCTS

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Bradley & Baker, New York City.

Huber & Company, New York City.

McIver & Son, Alex. M., Charleston, S. C.

Schmaltz, Jos. H., Chicago, Ill.

Wellmann, William E., Baltimore, Md.

CYANAMID

American Agricultural Chemical Co., New York City.

American Cyanamid Co., New York City.

Ashcraft-Wilkinson Co., Atlanta, Ga.

Bradley & Baker, New York City.

Wellmann, William E., Baltimore, Md.

DRYERS

Sackett & Sons Co., The A. J., Baltimore, Md.

ENGINEERS—Chemical and Industrial

Chemical Construction Corp., New York City.

Sackett & Sons Co., The A. J., Baltimore, Md.

Stedman's Foundry and Mach. Works, Aurora, Ind.

FERTILIZER MANUFACTURERS

American Agricultural Chemical Co., New York City.

American Cyanamid Company, New York City.

Armour Fertilizer Works, Atlanta, Ga.

Farmers Fertilizer Company, Columbus, Ohio.

International Minerals and Chemical Corporation, Chicago, Ill.

Phosphate Mining Co., The, New York City.

U. S. Phosphoric Products Division, Tennessee Corp., Tampe, Fla.

FISH SCRAP AND OIL

Ashcraft-Wilkinson Co., Atlanta, Ga.

Bradley & Baker, New York City.

Huber & Company, New York City.

McIver & Son, Alex. M., Charleston, S. C.

Wellmann, William E., Baltimore, Md.

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Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Bradley & Baker, New York City.
Wellmann, William E., Baltimore, Md.

IRON SULPHATE

Tenne-see Corporation, Atlanta, Ga.

INSECTICIDES

American Agricultural Chemical Co., New York City.

LIMESTONE

American Agricultural Chemical Co., New York City.
American Limestone Co., Knoxville, Tenn.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Bradley & Baker, New York City.
McIver & Son, Alex. M., Charleston, S. C.
Wellmann, William E., Baltimore, Md.

LOADERS—Car and Wagon

Sackett & Sons Co., The A. J., Baltimore, Md.

MACHINERY—Acid Making and Handling

Chemical Construction Corp., New York City.
Monarch Mfg. Works, Inc., Philadelphia, Pa.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Utility Works, The, East Point, Ga.

MACHINERY—Ammoniating

Sackett & Sons Co., The A. J., Baltimore, Md.

MACHINERY—Elevating and Conveying

Hayward Company, The, New York City.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Utility Works, The, East Point, Ga.

MACHINERY—Grinding and Pulverizing

Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Utility Works, The, East Point, Ga.

MACHINERY—Material Handling

Hayward Company, The, New York City.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Utility Works, The, East Point, Ga.

MACHINERY—Mixing, Screening and Bagging

Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Utility Works, The, East Point, Ga.

MACHINERY—Power Transmission

Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

MACHINERY—Superphosphate Manufacturing

Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
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MANGANESE SULPHATE

McIver & Son, Alex. M., Charleston, S. C.
Tennessee Corporation, Atlanta, Ga.

MIXERS

Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Utility Works, The, East Point, Ga.

NITRATE OF SODA

American Agricultural Chemical Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Barrett Division, The, Allied Chemical & Dye Corp., New York City.
Bradley & Baker, New York City.
Chilean Nitrate Sales Corp., New York City.

NITRATE OF SODA—Continued

Huber & Company, New York City.
International Minerals & Chemical Corporation, Chicago, Ill.
McIver & Son, Alex. M., Charleston, S. C.
Schmaltz, Jos. H., Chicago, Ill.
Wellmann, William E., Baltimore, Md.

NITROGEN SOLUTIONS

Barrett Division, The, Allied Chemical & Dye Corp., New York City.

NITROGENOUS ORGANIC MATERIAL

American Agricultural Chemical Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Bradley & Baker, New York City.
DuPont de Nemours & Co., Wilmington, Del.
Huber & Company, New York City.
International Minerals & Chemical Corporation, Chicago, Ill.
McIver & Son, Alex. M., Charleston, S. C.
Smith-Rowland Co., Norfolk, Va.
Wellmann, William E., Baltimore, Md.

NOZZLES—Spray

Monarch Mfg. Works, Philadelphia, Pa.

PHOSPHATE ROCK

American Agricultural Chemical Co., New York City.
American Cyanamid Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Bradley & Baker, New York City.
Huber & Company, New York City.
International Minerals & Chemical Corporation, Chicago, Ill.
McIver & Son, Alex. M., Charleston, S. C.
Phosphate Mining Co., The, New York City.
Ruhm, H. D., Mount Pleasant, Tenn.
Schmaltz, Jos. H., Chicago, Ill.
Southern Phosphate Corp., Baltimore, Md.
Wellmann, William E., Baltimore, Md.

PLANT CONSTRUCTION—Fertilizer and Acid

Chemical Construction Corp., New York City.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Utility Works, The, East Point, Ga.

POTASH SALTS—Dealers and Brokers

American Agricultural Chemical Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Bradley & Baker, New York City.
Huber & Company, New York City.
International Minerals & Chemical Corporation, Chicago, Ill.
Schmaltz, Jos. H., Chicago, Ill.
Wellmann, William E., Baltimore, Md.

POTASH SALTS—Manufacturers

American Potash and Chem. Corp., New York City.
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International Minerals & Chemical Corp., Chicago, Ill.
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PYRITES—Brokers

Ashcraft-Wilkinson Co., Atlanta, Ga.
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REPAIR PARTS AND CASTINGS

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Stedman's Foundry and Mach. Works, Aurora, Ind.
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ROUGH AMMONIATES

Bradley & Baker, New York City.
McIver & Son, Alex. M., Charleston, S. C.
Schmaltz, Jos. H., Chicago, Ill.
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SCALES—Including Automatic Bagging

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- Sackett & Sons Co., The A. J., Baltimore, Md.

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- Monarch Mfg. Works, Inc., Philadelphia, Pa.

SULPHATE OF AMMONIA

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SULPHUR

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- American Agricultural Chemical Co., New York City.
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Ashcraft-Wilkinson Co., Atlanta, Ga.
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International Minerals & Chemical Corporation, Chicago, Ill.
McIver & Son, Alex. M., Charleston, S. C.
U. S. Phosphoric Products Division, Tennessee Corp., Tampa, Fla.
Wellmann, William E., Baltimore, Md.

SUPERPHOSPHATE

- American Agricultural Chemical Co., New York City.
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Ashcraft-Wilkinson Co., Atlanta, Ga.
Bradley & Baker, New York City.
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International Minerals & Chemical Corporation, Chicago, Ill.
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U. S. Phosphoric Products Division, Tennessee Corp., Tampa, Fla.

- Wellmann, William E., Baltimore, Md.

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International Minerals & Chemical Corporation, Chicago, Ill.
McIver & Son, Alex. M., Charleston, S. C.
Schmaltz, Jos. H., Chicago, Ill.
Wellmann, William E., Baltimore, Md.

UREA

- DuPont de Nemours & Co., E. I., Wilmington, Del.

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- DuPont de Nemours & Co., E. I., Wilmington, Del.

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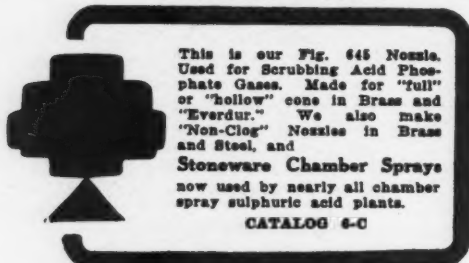
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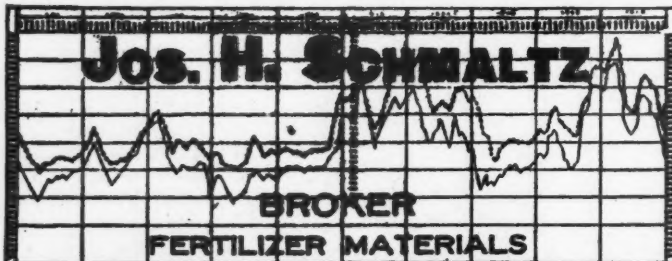
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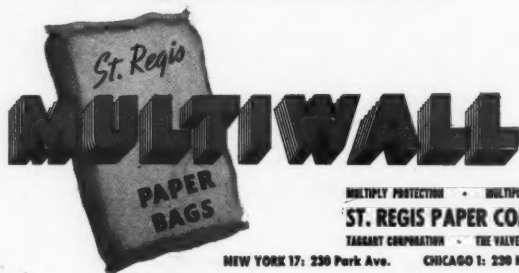
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